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**UNITED STATES DEPARTMENT OF COMMERCE**  
**Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/705,759	11/06/00	HWANG	M 3449-0137P <i>dm</i>

002292 MMC2/1024  
BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH VA 22040-0747

EXAMINER  
PHAN, T

ART UNIT	PAPER NUMBER
2841	

DATE MAILED: 10/24/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

**Office Action Summary**

Application No.

09/705,759

Applicant(s)

HWANG ET AL.

Examiner

Thanh S Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Specification***

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the heat sink must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Lines 2-4 recite "wherein connecting pins and inserting holes... respectively, are complementary formed and defined on and in the power

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board". It is not understood how "connecting pins and inserting holes" are complementary formed and defined".

As far as the Examiner can interpret the claims;

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maue et al. (U.S Pat # 5,995,380).

**Regarding claim1.** Maue discloses an electronic junction box (system module), comprising: a case constituting a body of the one system module (Figure 2); a power board (reference 63) located inside the case and electrically connected with the power pins (references 117 locate on 63); and a signal board (reference 51) located inside the case and electrically connected with the signal pins (references 117 locate on 51); power pins and signal pins disposed adjacent to three edges on a surface of the case (column 3, lines 39-42). But does not discloses that the power pins and signal pins disposed adjacent to three edges on a surface of the case in a manner such that substantially a U-shaped arrangement is obtained. It would have been obvious to one of ordinary skill in the art at the time the invention was made to disposes the pins adjacent to three edges on a surface of the case in a manner such that substantially a

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U-shaped arrangement is obtained, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

**Regarding claim 3.** Maue discloses the one system module as claimed in claim 1 except for wherein connecting pins and inserting holes through which the connecting pins are inserted, respectively, are complementarily formed and defined on and in the power board and the signal board, so as to electrically connect the power board and the signal board with each other. However, Maue teaches that it is known to projected male plates 117 (pins) beyond different layers of the system module as set forth at column 3, lines 39-43. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to complementarily forms and defines the connecting pins and inserting holes, as taught by Maue in order to connect the power board and the signal board with each other.

Claim2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maue et al. as applied to claim 1 above, and further in view of Cooper et al. (U.S Pat # 5,375,040).

**Regarding claim 2.** Maue discloses the one system module as claimed in claim 1 except for wherein at least two corner portions among four corner portions of the case, which two corner portions are opposite to each other in a diagonal direction, are defined with engaging holes, respectively, through which the case and a heat sink are coupled

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with each other. Cooper discloses a case for a modular electronic circuit wherein at least two corner portions among four corner portions of the case, which two corner portions are opposite to each other in a diagonal direction, are defined with engaging holes (reference 14), respectively, through which the case and a heat sink (reference 70) are coupled with each other. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Maue with Cooper's case for quicker dissipation of heat generated by the circuit boards.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nakamura (U.S Pat # 6,224,379) discloses a Branching Connector and Electrical Connector Box Assembly.

Onizuka (U.S Pat # 5,877,944) discloses an Electric Connector Box For Housing Wire Harness.

Gladd et al. (U.S Pat # 6,000,952) discloses an Interconnect System For Intergrating a Bussed Electrical Distribution Center With a Printed Circuit Board.

Daoud et al. (U.S Pat # 6,203,334) discloses a Modular Jack Receptacle Including a Removable Interface.

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### **Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh S Phan whose telephone number is 703-305-0069. The examiner can normally be reached on M-F 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 703-308-3301. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7722 for regular communications and 703-305-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TSP  
October 22, 2001

A handwritten signature in black ink, appearing to be 'TSP', is written over a faint, circular official stamp. The signature is fluid and cursive.